

Introducing the Natural Development Server CICS Adapter

This document describes the purpose and the functions of the Natural Development Server (NDV) CICS Adapter.

The following topics are covered:

- Purpose of the Natural Development Server CICS Adapter
 - Remote Development Functions
 - CICS Support
 - Product Interaction
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Purpose of the Natural Development Server CICS Adapter

The Natural Development Server CICS Adapter is designed for a Natural Single Point of Development context where it enables the use of a Natural Development Server (NDV, running under OS/390 in batch mode or under SMARTS on VSE/ESA) within a CICS TP monitor environment.

See also

- Natural Single Point of Development
- Natural Development Server for OS/390
- Natural Development Server under SMARTS on VSE/ESA

Remote Development Functions

The Natural Development Server CICS Adapter enables you to execute a Natural Single Point of Development session within CICS.

In the Tools menu, Natural Studio offers you a function named "Map Environment". This function enables you to open a Natural session on a remote development server.

If you configure the remote development server for use in conjunction with the Natural Development Server CICS Adapter, this Natural session is not hosted by the remote development server, but it is dispatched remotely within a specified CICS region.

CICS Support

The CICS support is not implemented within the front-end stub NATRDEVS. For dispatching the Natural sessions in CICS, the development server continues to run in batch or under SMARTS. But it uses the remote front-end NATCSRFE that is delivered with the Natural Development Server to dispatch the Natural sessions in CICS. That is, depending on the installed front-end, a development server dispatches the sessions locally (NCFNUC for SMARTS or NATMVS for batch) or remote (NATCSRFE for CICS).

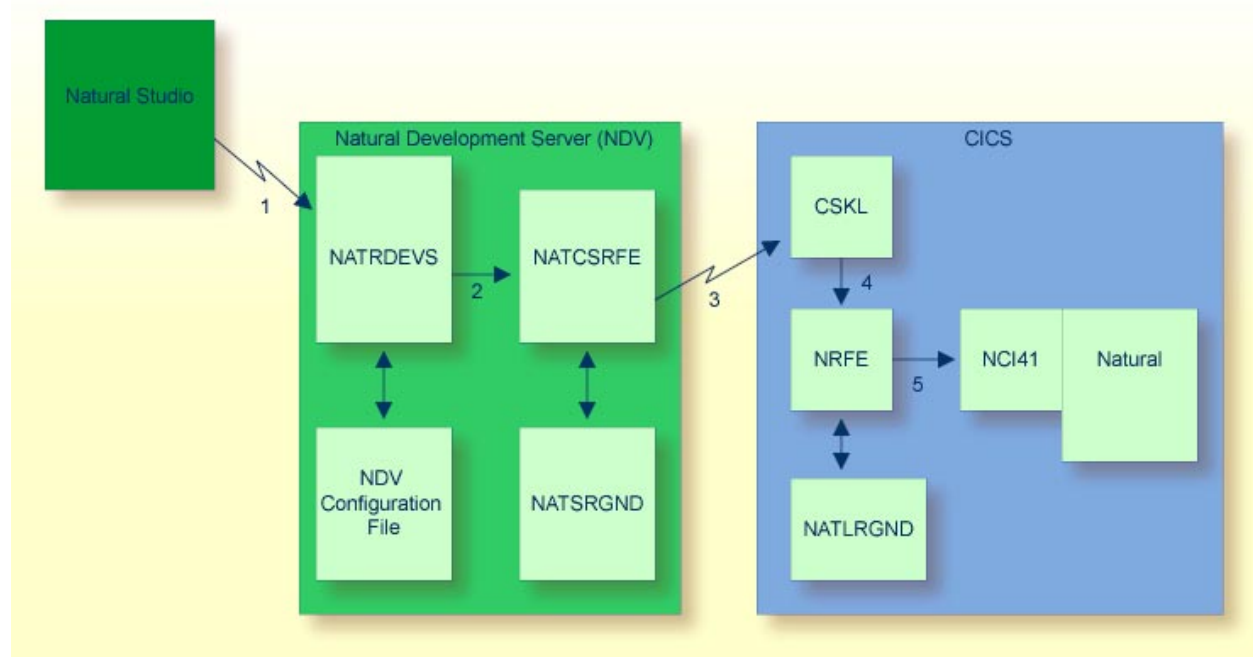
NATCSRFE in turn accepts the Natural request from NATRDEVS and transfers it to a configured CICS environment using the CICS Socket Interface. Within the CICS environment, a CICS Natural transaction is launched that processes the Natural request and returns the result. Thus it is not necessary to execute the entire development server under CICS. Only small working units (Natural requests such as "save source" or "get library list") are transferred to CICS for execution.

The Natural Development Server CICS Adapter comprises the following components:

NATCSRFE	The remote front-end called by the Natural Development Server to dispatch a Natural request. It is loaded into the development server address space.
NATCNRFE	The counterpart of NATCSRFE. NATCNRFE runs in the CICS address space. It is started by the IBM-provided standard listener of the CICS Socket Interface (refer also to <i>TCP/IP V3R1 for MVS: CICS TCP/IP Socket Interface Guide</i> and <i>TCP/IP for VSE/ESA VIR5 IBM Program Setup and Supplementary Information</i>).
NATSRGND/ NATLRGND	Transmits the NDV-relevant data between Natural Development Server and the Natural session running in CICS. NATSRGND must be loaded into the Natural Development Server address space and NATLRGND into the CICS address space.

Product Interaction

The following figure illustrates the interaction between Natural Studio as a remote development client, the Natural Development Server and the CICS environment involved.



1. Natural Studio sends the remote development request to the Natural Development Server using the port number specified with the Natural Development Server configuration variable `PORT_NUMBER`.
2. The Natural Development Server dispatches the Natural session using the Natural front-end you have specified with the Natural Development Server configuration variable `FRONTEND_NAME`. Specify `NATCSRFE` in order to use the Natural Development Server CICS Adapter. For details, see the configuration parameter descriptions in the platform-specific document *Configuring the Natural Development Server*.
3. `NATCSRFE` transmits the request to the host/port specified with the Natural Development Server configuration variable `RFE_CICS_TA_HOST / RFE_CICS_TA_PORT`. You must configure the CICS-supplied standard listener `CSKL` to listen at this port.
4. `CSKL` launches the CICS transaction you have specified with the Natural Development Server configuration variable `RFE_CICS_TA_NAME` (`NRFE` in this example). This transaction must be defined to use the program `NATCNRFE`.
5. `NATCNRFE` finally dispatches the Natural session using the Natural CICS Front-End you have specified with

the Natural Development Server configuration variable RFE_CICS_FE_NAME.